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MCA-06(New)/MCA-7(Old)

June/December – Examination 2020

**Master of Computer Application
(1st Year) Examination**

Data Structure Through C Language

Paper : MCA-06(New)/MCA-7(Old)

Time : 2 Hours]

[Maximum Marks : 80

Note :- The question paper is divided into two Sections A and B. Write answers as per the given instructions.

Section-A

8×2=16

(Very Short Answer Type Questions)

Note :- Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto **30** words. Each question carries 2 marks.

1. (i) What is Data Structure ?

(ii) What is the C programming language ?

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Turn Over

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- (iii) Give one example of a graph.
- (iv) What is Algorithm ?
- (v) What do you mean by Circular Queue ?
- (vi) What do you mean by Linked List ?
- (vii) What is Array ?
- (viii) What is Data Type ?

Section-B **4×16=64**

(Short Answer Type Questions)

Note :- Answer any *four* questions. Answer should not exceed **200** words. Each question carries 16 marks.

- 2. Distinguish between Linear Data Structure and Non-linear Data Structure.
- 3. What is a singly linked list ? Explain the procedure to insert a new node in a single linked list.
- 4. Discuss any *two* applications of stack. Explain with a suitable example.
- 5. Explain the insertion and deletion operation in the queue with a suitable example.

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- 6. Explain the process of binary search with a suitable example.
- 7. Write an algorithm to find the factorial of a given number. Also explain with a suitable example.
- 8. Write a short note on dynamic memory allocation.
- 9. Write a short note on Priority Queue.

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